



## Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

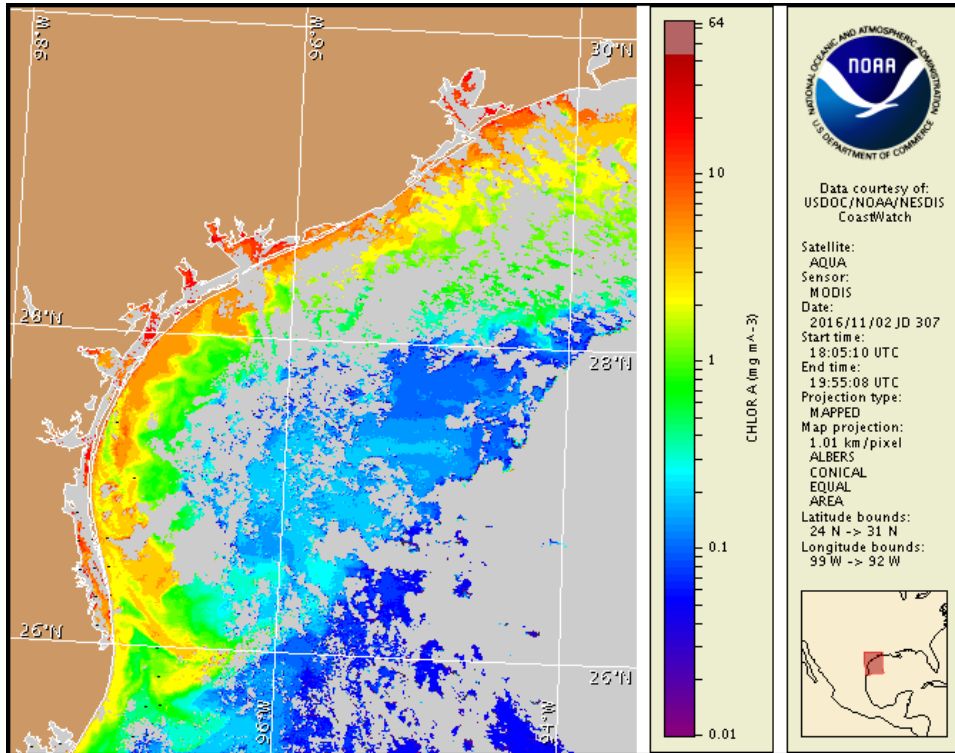
Thursday, 03 November 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, October 31, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from October 24 to November 2: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

[http://tidesandcurrents.noaa.gov/hab/hab\\_publication/habfs\\_bulletin\\_guide.pdf](http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf)

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

## Conditions Report

*Karenia brevis* (commonly known as Texas red tide) ranges from not present to low concentrations along the Texas coast in the Aransas Pass to Padre Island National Seashore regions. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, November 3 through Monday, November 7 is listed below:

**County Region: Forecast (Duration)**

**Bay region-Corpus Christi Bay: Low (Th-M)**

**Bay region-Upper Laguna Madre: Low (Th-M)**

**Aransas Pass to PINS: Low (Th-M)**

**All Other Texas Regions: None expected (Th-M)**

Check [http://tidesandcurrents.noaa.gov/hab/beach\\_conditions.html](http://tidesandcurrents.noaa.gov/hab/beach_conditions.html) for recent, local observations.

## Analysis

*Karenia brevis* concentrations range between 'not present' and 'low a' along the Texas coast from Aransas Pass to the Padre Island National Seashore (PINS) region (TPWD; 10/31-11/3). In the Aransas Pass to Padre Island National Seashore (PINS) region, sampling from the Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, continues to indicate 'background' to 'low a' *Karenia sp.* concentrations (TAMU; 10/31-11/3). No new samples have been received from the Corpus Christi Bay or Upper Laguna Madre regions, and no impacts have been reported from the area since 10/21 (TPWD). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at:

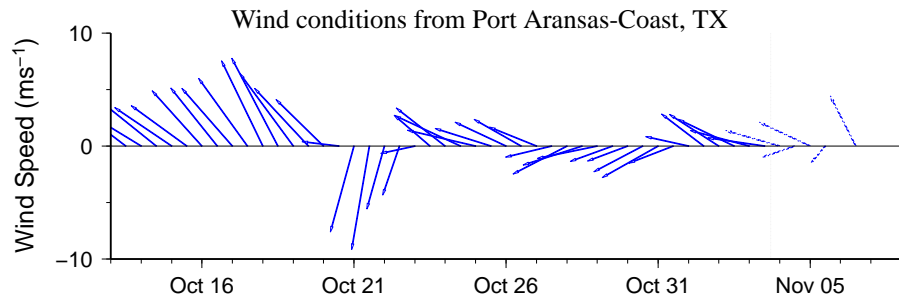
<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>.

For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua ensemble imagery (11/2; shown left) is partially obscured by clouds along- and offshore from Sabine Pass to Pass Cavallo, limiting analysis. Patches of elevated chlorophyll (2-10  $\mu\text{g/L}$ ) with the optical characteristics of *K. brevis* are visible offshore from the PINS region to south of the Rio Grande.

Forecast models based on predicted near-surface currents indicate a maximum transport of 30 km south from the Port Aransas region from November 2-6.

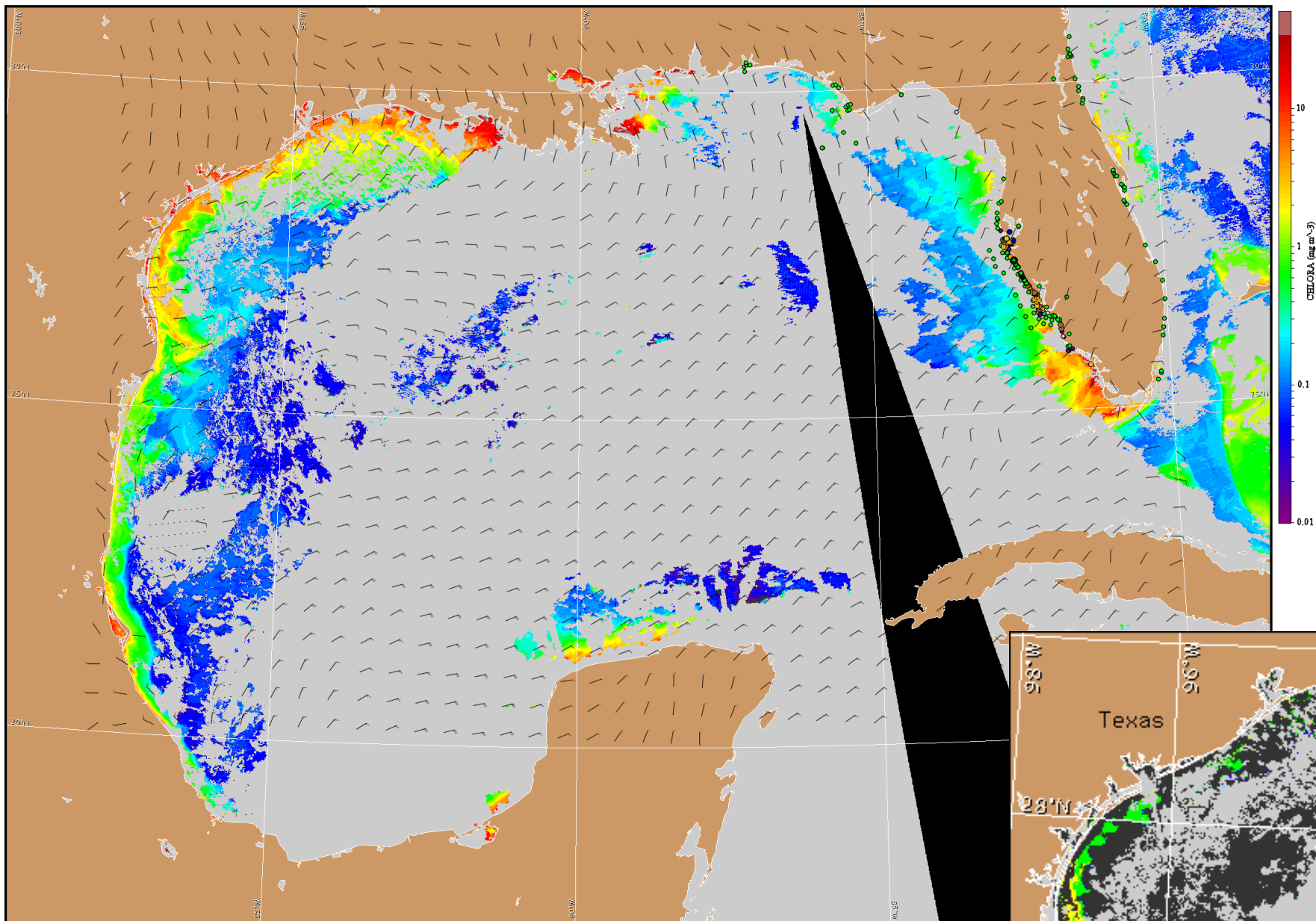
Kavanaugh, Yang



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

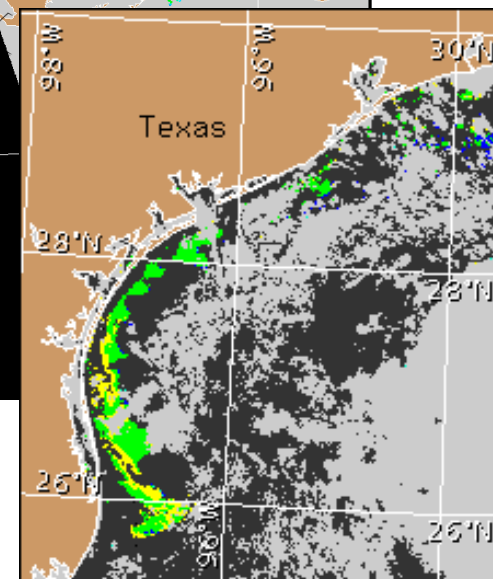
## Wind Analysis

**Baffin Bay to Port Aransas:** East winds (10-15kn, 5-8m/s) today through tonight. North-east winds (10-15kn) Friday becoming east winds (5-15kn, 3-8m/s) Friday night through Saturday night. Southeast winds (5-15kn) Sunday through Monday night.



Satellite chlorophyll image and forecast winds for November 4, 2016 12Z with points representing cell concentration sampling data from October 24 to November 2: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).